

ABSTRACT OF THE DISCLOSURE

The invention relates to improving parameter estimation and speech synthesis. Pursuant to one aspect of the invention, a path of pitch candidates having low errors is tracked to determine a pitch estimate. Pursuant to another aspect of the invention, a number of parameters are used to classify speech segments. Pursuant to another aspect of the invention, a voicing parameter is determined using a threshold value and bands are marked voiced or unvoiced depending on two error functions that compare synthesized voiced and unvoiced spectra to an original speech spectrum. Pursuant to another aspect of the invention a voicing parameter is used to facilitate lower bits for transmitting voicing decisions. Last, pursuant to other aspects of the invention, unvoiced speech is synthesized by incorporating a random generator, and harmonics phases are initialized with a fixed set of values.